



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-1415; Directorate Identifier 2011-NM-145-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all The Boeing Company Model 717-200 airplanes. This proposed AD was prompted by reports of cracks found on the center section ribs of the horizontal stabilizers. This proposed AD would require repetitive inspections for cracking of the aft face of the left and right rib hinge bearing lugs of the center section of the horizontal stabilizer; and crack measurement, repairs, and installation of a new center section rib if necessary. We are proposing this AD to detect and correct cracks in the left and right bearing lugs of the rib hinge spreading at the same time, which could result in failure of both hinge bearing lugs. Failure of the hinge bearing lugs could result in the inability of the horizontal stabilizer to sustain flight loads and therefore reduce the controllability of the airplane.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, California 90846-0001; phone: 206-544-5000, extension 2; fax: 206-766-5683; e-mail: dse.boecom@boeing.com; Internet: <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: George Garrido, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Boulevard, Lakewood, California 90712-4137; phone: 562-627-5357; fax: 562-627-5210; e-mail: George.Garrido@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2011-1415; Directorate Identifier 2011-NM-145-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

We have received reports of cracks found on the left, right, or, in several instances, both of the center section ribs of the horizontal stabilizer on Model MD-80 and MD-90 series airplanes. Two cracks were reported on Model MD-80 series airplanes having accumulated between 23,700 and 41,963 total flight hours and between 23,300 and 35,294 total flight cycles. Nine cracks were reported on Model MD-90 series airplanes having accumulated between 9,051 and 26,053 total flight hours and between 8,939 and 25,260 total flight cycles. These cracks were found on the aft face of the hinge bearing lugs of the horizontal stabilizer. Undetected cracks in the left and right bearing lugs of the rib hinge, if not corrected, could spread at the same time, which could result in failure of both hinge bearing lugs, the inability of the horizontal stabilizer to sustain flight loads, and consequent reduced controllability of the airplane.

The design of the horizontal rib on Model 717-200 airplanes is the same rib design used on Model MD-80 and MD-90 series airplanes, and is susceptible to the same failure mode. Therefore, Model 717-200 airplanes may also be subject to the identified unsafe condition.

Related Rulemaking

We have issued similar rulemaking in AD 2011-01-11, Amendment 39-16565 (76 FR 430, January 5, 2011), for The Boeing Company Model MD-90 airplanes, that requires repetitive high frequency eddy current (HFEC) inspections for cracking on the hinge bearing lugs of the left and right sides of the center section ribs of the horizontal stabilizer, and related investigative and corrective actions if necessary.

We have also issued NPRM 2011-NM-027-AD (76 FR 53346, August 26, 2011), for The Boeing Company Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and MD-88 airplanes. That NPRM proposes to require repetitive HFEC inspections for cracking of the left and right rib hinge bearing lugs of the aft face of the center section of the horizontal stabilizer; measuring crack length and blending out cracks; and replacing the horizontal stabilizer center section rib, if necessary.

Relevant Service Information

We reviewed Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011. This service information describes procedures for repetitive eddy current high frequency (ETHF) inspections for cracks on the aft face on the left and right rib hinge bearing lugs of the center section of the horizontal stabilizer; and crack measurement, repairs, post-repair repetitive inspections, and installation of a new center section rib if necessary.

FAA’s Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishing the actions specified in the service information described previously, except as discussed under “Differences Between the Proposed AD and the Service Information.”

Differences Between the Proposed AD and the Service Information

Operators should note that, although the Accomplishment Instructions of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011, describe procedures for submitting inspection results, this proposed AD would not require those actions.

Costs of Compliance

We estimate that this proposed AD affects 129 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
ETHF Inspection	6 work-hours X \$85 per hour = \$510 per inspection cycle	\$0	\$510 per inspection cycle	\$65,790 per inspection cycle

We have received no definitive data that would enable us to provide cost estimates for the on-condition labor costs specified in this proposed AD. The estimated parts cost for a replacement rib is \$16,387.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

The Boeing Company: Docket No. FAA-2011-1415; Directorate Identifier 2011-NM-145-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company Model 717-200 airplanes, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 5510, Horizontal Stabilizer Structure.

(e) Unsafe Condition

This AD was prompted by reports of cracks found on the center section ribs of the horizontal stabilizers. We are issuing this AD to detect and correct cracks in the left and right bearing lugs of the rib hinge spreading at the same time, which could result in

failure of both hinge bearing lugs. Failure of the hinge bearing lugs could result in the inability of the horizontal stabilizer to sustain flight loads and therefore reduce the controllability of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Repetitive Eddy Current High Frequency (ETHF) Inspections

Before the accumulation of 35,000 total flight cycles, or within 8,275 flight cycles after the effective date of this AD, whichever occurs later: Do an ETHF inspection for cracks of the aft face on the left and right rib hinge bearing lugs of the center section of the horizontal stabilizer, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011. If no crack is found, repeat the inspection thereafter at intervals not to exceed 10,500 flight cycles.

(h) Crack Measurement

If any crack is found during any inspection required by paragraph (g) of this AD: Before further flight, measure the length of the crack, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011.

(i) Blend Out Repair, ETHF Inspections, and Corrective Action for Certain Crack Lengths

For any crack that meets “Condition 2A” of Table 1 of 1.E., “Compliance,” of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011: Do the actions in paragraphs (i)(1) and (i)(2) of this AD.

(1) Before further flight, do a blend out repair, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011.

(2) Within 14,200 flight cycles after accomplishing the blend out repair required by paragraph (i)(1) of this AD: Do an ETHF inspection of the blend out repair area for cracking, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011. If no cracking is found, repeat the inspection thereafter at intervals not to exceed 5,400 flight cycles.

(i) If any crack is found during the ETHF inspection required by paragraph (i)(2) of this AD: Before further flight, remove the cracked center section rib of the horizontal stabilizer and install a new center section rib, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011.

(ii) Within 35,000 flight cycles after the installation of the new center section rib, do the actions in paragraph (g) of this AD.

(j) Corrective Action for Certain Crack Lengths

For any crack that meets “Condition 2D” of Table 1 of 1.E., “Compliance,” of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011: Before further flight, remove the cracked center section rib of the horizontal stabilizer and install a new center section rib, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011. Within 35,000 flight cycles after the installation of the new rib, do the actions in paragraph (g) of this AD.

(k) No Reporting Requirement

Although Boeing Alert Service Bulletin 717-55A0011, dated May 17, 2011, specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(l) Alternative Methods of Compliance (AMOCs)

(1) The Manager Los Angeles Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal

inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(m) Related Information

(1) For more information about this AD, contact George Garrido, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Boulevard, Lakewood, California 90712-4137; phone: 562-627-5357; fax: 562-627-5210; e-mail: George.Garrido@faa.gov.

(2) For service information identified in this AD, Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, California 90846-0001; phone: 206-544-5000, extension 2; fax: 206-766-5683; e-mail: dse.boecom@boeing.com; Internet: <https://www.myboeingfleet.com>. You may review copies of the referenced service

information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on January 6, 2012.

Ali Bahrami,
Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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